Docket No.: SON-2129/DIV (80001-2910)

### AMENDMENTS TO THE SPECIFICATION

# On Page 7, Paragraph 2:

To achieve the second object, according to the second invention, there is also provided A-a\_semiconductor laser including: a light emission function layer stack including a cladding layer and an active layer formed on one plane of a translucent substrate; and a electrode serving as light leakage preventive film for shielding light and injecting a current in the light emission function layer stack, which is formed on the other plane of the translucent substrate.

### On Page 8, Paragraph 1:

With these configurations, the light leakage preventive film is formed on the surface, opposed to the light emission function layer stack, of the translucent substrate, and accordingly, even if laser light generated from the light emission function layer stack is leaked to the translucent substrate side, it is absorbed or reflected in or from the light leakage preventive film, to thereby suppress leakage of light to the outside. Further, since the light leakage preventive film is formed on the side, opposed to the light emission function layer stack, of the translucent substrate, it is possible to prevent the light leakage preventive film from exerting <u>an</u> adverse effect on the laser light generation characteristic by the light emission function layer stack.

#### On Page 10, Paragraph 2:

FIG. 1 shows a configuration of a semiconductor laser according to the embodiment of the first invention. The semiconductor laser includes a semiconductor layer stack 20 on one plane of a substrate 11. Each layer of the semiconductor layer stack 20 is composed of a nitride based III-V compound semiconductor containing at lease one kind of group IIIB-IIIA elements and at least nitrogen (n) of group VB-VA elements in the short-period type periodic table. The semiconductor layer stack 20 has a buffer layer 21, an n-side contact layer 22, an n-type cladding layer 23, an n-type guide layer 24, an active layer 25, a p-type or n-type guide layer 26, a p-type cladding layer 27, and a p-side contact layer 28, which

Docket No.: SON-2129/DIV (80001-2910)

layers are sequentially stacked in this order on the substrate 11. Of these layers, the n-side contact layer 22, the n-type cladding layer 23, and the n-type guide layer 24 or 26 are n-type semiconductor layers which correspond to first conductive type semiconductor layers, while the p-type guide layer 26, the p-type cladding layer 27, and the p-side contact layer 28 are p-type semiconductor layers which correspond to second conductive type semiconductor layers.

#### On Page 14, Paragraph 1:

The semiconductor layer composed of the semiconductor layer stack 20 and the substrate 11 has a pair of resonator end surfaces 41 and 42 opposed to each other in the resonator direction A. A light emission side reflecting film 43 is formed on one resonator end surface 41, and a non-light emission side reflecting film 44 is formed on the other resonator end surface 42. The reflecting film 43 is adjusted such that the reflectance thereof against an emission wavelength in a region corresponding to an oscillation region of laser light becomes lower, and the reflecting film 44 is adjusted such that the reflectance thereof against an emission wavelength in a region corresponding to the oscillation region of laser light becomes higher. With this configuration, laser light generated by the active layer 25 and its neighborhood is amplified between the reflecting films 43 and 44 and is mainly emitted from the reflecting film 43 side. In addition, a laser beam is emitted even from the reflecting film 44 side depending on the reflectance thereof, although the quantity of the laser beam on the reflecting film 44 side is very much smaller than that on the reflecting film 43 side; however, in this specification, one reflecting film side from which a laser beam is intended to be emitted is called "light emission side" and the other reflecting film side is called "non-light emission side".

#### On Page 22, Paragraph 2:

In this semiconductor laser, when a specific voltage is applied between the n-side electrode 32 and the p-side electrode 33, a current is injected in the active layer 25, to cause light emission due to electron-hole recombination. The light thus emitted is reflected and thereby amplified between the reflecting films 43 and 44, to cause laser oscillation. The oscillated light is then emitted to the outside as laser

Docket No.: SON-2129/DIV (80001-2910)

light mainly through the reflecting film 43. By the way, in the case where the semiconductor laser is used while being contained in a package, part of <a href="the-laser">the-laser</a> light thus emitted is reflected in the package and is returned to the semiconductor laser as stray light. In this case, according to this embodiment, since the refractive index of the reflecting film 43 against an emission wavelength is set to a value between the refractive index of the substrate 11 and the effective refractive index, the reflectance in the region, corresponding to the substrate 11, of the reflecting film 43 becomes higher. As a result, it is possible to reduce the quantity of stray light entering the semiconductor laser from the region, corresponding to the substrate 11, of the reflecting film 43, and hence to suppress occurrence of noise and improve characteristics such as a variation in output.

# On Page 31, Paragraph 2:

The thickness of each of <u>the</u> layers of the dielectric thin film is not limited to  $\lambda$ /4n but may be set to any value insofar as the combination of the layers having respective thicknesses is effective to increase the reflectance.

#### On Page 32, Paragraph 4:

A paint having a color capable of absorbing spontaneous emission light may be applied on the surface, opposed to the light emission function layer stack, of the sapphire substrate. In this case, the sapphire substrate provided with the light emission function layer stack may be divided into parts, each of which be <u>is</u> assembled in a package, and then a paint be <u>is</u> applied on the other surface of the sapphire substrate of the part; or a paint may be applied overall on the other surface of the sapphire substrate before the sapphire substrate is divided into parts.